

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1 to 14. (Cancelled)

15. (New) A method of measuring transmission characteristics of a radio channel in a radio communications system comprised of base stations and a radio station, wherein communications are transmitted over the radio communications system in time frames, each of the time frames comprising time slots, the method comprising:

each of the base stations transmitting bursts in a time slot, each of the bursts comprising a channel measurement sequence for use in obtaining characteristics of a transmission channel in which a corresponding burst is transmitted;

wherein the channel measurement sequences are transmitted by the base stations at a substantially constant power level, wherein the substantially constant power level at which the channel measurement sequences are transmitted is substantially the same for all of the base stations.

16. (New) The method of claim 15, wherein the bursts comprise data blocks in addition to channel measurement sequences.

17. (New) The method of claim 16, wherein a data block of a burst is transmitted at a power level that is different from a power level at which a channel measurement sequence of the burst is transmitted.

18. (New) The method of claim 15, wherein the base stations are synchronized prior to transmitting the bursts.

19. (New) The method of claim 15, further comprising:
the radio station using cyclic correlation for channel measurement.

20. (New) The method of claim 19, wherein each base station transmits a same channel measurement sequence.

21. (New) The method of claim 20, wherein different base stations transmit channel measurement sequences with different phase codes.

22. (New) The method of claim 15, wherein a channel measurement sequence in a predetermined time slot includes an identifier.

23. (New) The method of claim 22, wherein the channel measurement sequence in the predetermined time slot is substantially identical to channel measurement sequences in other time slots in a corresponding time frame, and wherein the method further comprises:

phase modulating the channel measurement sequence in the predetermined time slot.

24. (New) The method of claim 23, wherein phase modulating comprises modulating the channel measurement sequence in the predetermined time slot 180° between two time frames.

25. (New) The method of claim 23, wherein the predetermined time slot is the 0th time slot.

26. (New) A radio communications system comprising:

base stations; and

a radio station, wherein communications are transmitted over the radio communications system in time frames, each of the time frames comprising time slots;

wherein each of the base stations is configured to transmit bursts in a time slot, each of the bursts comprising a channel measurement sequence for use in obtaining characteristics of a transmission channel in which a corresponding burst is transmitted; and

wherein the base stations are configured to transmit the channel measurement sequences at a substantially constant power level, wherein the substantially constant power level at which the channel measurement sequences are transmitted is substantially the same for all of the base stations.

27. (New) The radio communication system of claim 26, wherein the base stations are configured to transmit data blocks in bursts in addition to channel measurement sequences.

28. (New) The radio communication system according to claim 27, wherein the base stations are configured to transmit the data blocks at power levels that are different from power levels at which the channel measurement sequences are transmitted.

29. (New) The radio communications system of claim 26, wherein the radio communications system comprises a time division duplex (TDD) communications system.

30. (New) The radio communications system of claim 26, wherein the radio communications system comprises a frequency division duplex (FDD) communications system.

31. (New) The radio communications system of claim 26, wherein each of the base stations is configured to transmit the bursts comprising channel measurement sequences at substantially a same time.

32. (New) The radio communications system of claim 26, wherein at least one channel measurement sequence is transmitted in a middle of a corresponding burst.

33. (New) The radio communications system of claim 26, wherein the base stations are synchronized prior to transmitting the bursts.

Applicant : Gerhard Ritter
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34. (New) The radio communications system of claim 26, wherein the radio station is configured to use cyclic correlation for channel measurement.